

AYURVEDA INTRODUCE YOGASANA THERAPY IN PCOD AND PCOS – REVIEW ARTICLE

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ABSTRACT

PCOD (Polycystic Ovary Disease) and PCOS (Polycystic Ovary Syndrome) are used interchangeably, but PCOS is more commonly used. Both refer to a hormonal disorder that affects women's ovaries, causing irregular periods, hormonal imbalances, and other symptoms. Polycystic ovary syndrome (PCOS) is a hormonal disorder that affects many women worldwide, and incorporating Yogasana's into their routine can be beneficial. Yogasan, an ancient practice that combines physical postures, breath control, and meditation, has been shown to help manage the symptoms of PCOS. Several yoga asanas can specifically target the root causes of PCOS. Poses like Bhujangasana (Cobra pose) and Dhanurasana (Bow pose) can help improve blood circulation to the ovaries and regulate hormonal imbalances.

Paschimottanasana (Seated Forward Bend) and Baddha Konasana (Butterfly pose) can stretch the pelvic muscles, promoting healthy ovarian function. Practicing yoga regularly can also help reduce stress, which is a common trigger for hormonal imbalances associated with PCOS. Asanas such as Shavasana (Corpse pose) and Sukhasana (Easy pose) can calm the mind and relax the body, reducing stress and anxiety.

KEYWORDS: PCOD and PCOS, Stress and Anxiety, Yogasan, Meditation.

INTRODUCTION

PCOD (Polycystic Ovary Disease) and PCOS (Polycystic Ovary Syndrome) are used interchangeably, but PCOS is more commonly used. Both refer to a hormonal disorder that affects women's ovaries, causing irregular periods, hormonal imbalances, and other symptoms.

PCOD (Polycystic Ovarian Disease) is mostly caused by a combination of hormonal imbalance and genetic tendencies. In a standard menstrual cycle, the two ovaries will alternately release mature, ready-to-be-fertilized eggs each month. For someone with PCOD, however, the ovaries will often release either immature or only partially-mature eggs, which can go on to develop into cysts (little sacs filled with liquid).^[1]

High testosterone levels, irregular menstrual cycles, and small cysts on ovaries are symptoms of polycystic ovarian syndrome (PCOS). Polycystic ovaries are a morphological issue, but polycystic ovary syndrome is mostly a metabolic condition (hyperandrogenemia). Follicular development suppression, ovarian microcysts, anovulation, and monthly irregularities are all symptoms of hyperandrogenism, which is a sign of PCOS.^[2]

In Yogashastra 8 steps of yoga Yam, Niyam, Assam, Pranayama, Pratyahar, Dharna, Dhyan, Samadhi. Concepts of Yoga are well addressed in Ayurveda. Chakrapanidatta, the commentator of Charaka Samhita, explained Charaka and Patanjali as one and the same.^[3,4]

Since human body & mind are mutually interrelated & interact on each other, Yoge has equally thought of mind along with body. It is also proven fact that completely mind influence the body more than the body influence the mind. In addition, yoga asanas can aid in weight management, as many women with PCOS struggle with weight gain. Poses like Virabhadrasana (Warrior pose) and Trikonasana (Triangle pose) can strengthen the muscles and promote weight loss. Regular practice of yoga asanas, combined with a healthy lifestyle and medical treatment, can contribute to the management of PCOS symptoms and overall well-being. yoga has tough off all the aspect of human life while thinking of man it also becomes imperative to think of him as a part of the social system. This behavior and action give a particular shape to that society. Yoga first shown the way he shoud live in the socirty. yoga is India's gift to the world it is an ancient science of health and healing practice by our ancients to realize all the potential of an individual within himself in modern age of stress

and strain it is necessary to generate awareness about health in the mind of today generation and common man revive yoga and a relation and scientific manner.

AIM OF STUDY

Yoga is now practiced widely for fitness and wellbeing in health clubs, community centres, yoga studios and schools. This popularity has created a need for well controlled research and clinical trials to evaluate its efficacy for improving general health and preventing disease, and to evaluate its role as an adjunctive or complementary therapy for the management of pain or chronic diseases PCOD and PCOS is one of them. The Aim of review study was to search the scientific literature, primarily seeking out systematic reviews, critical reviews and narrative reviews that have included studies with a focus on the health benefits of yoga in healthy individuals and clinical populations.

MATERIALS AND METHODS

Differences between PCOD and PCOS^[5]

Though it may sound similar enough, PCOS (polycystic ovarian syndrome) is a bit different from PCOD. In PCOD the ovaries start releasing immature eggs that lead to hormonal imbalances and swollen ovaries, among other symptoms; while in PCOS, endocrine issues cause the ovaries to produce excess androgens, which makes eggs prone to becoming cysts. These cysts won't, however, be released like in PCOD - rather they build up in the ovaries themselves.

First and foremost, PCOS is usually considered a more serious condition. PCOD can often be managed just by making informed lifestyle changes, and may not even require further medical treatment at all. PCOS however is a disorder of the endocrine system - it has more threatening implications and its treatment almost always requires external hormone intake.

Along with that, PCOD is also far more common, at least in women. About one-third of all menstruating women around the globe have PCOD. PCOS is not that common - though it isn't rare either. According to a study conducted in Southern India and Maharashtra, about 9.13% of menstruating women in those regions suffer from PCOS, while 22.5% have PCOD.

And finally, both the hormonal disorders do have infertility as a shared side effect, but not to the same extent. As discussed before, if one has PCOD, with some extra precautions, and minimal medical intervention, pregnancy is almost always possible. However, PCOS has too

many hormonal irregularities, and conception is much harder in this case. While a drug called Clomiphene is commonly taken to increase fertility if one has PCOS, this medication also usually results in increased chances of twins/multiple births, which is not always something that people want.

Whether it's PCOS or PCOD, one cannot argue that both have a sense of social stigma and misinformation surrounding them, especially in Indian society. They're such common disorders yet they're treated as something shameful, to keep under wraps - as are all things related to periods.

Role of yoga in life style related menstrual disorders with special reference to pcos

Stress activates release of Corticotrophin releasing hormone (CRH) from hypothalamus. CRM activates sympathetic Nervous system and also regulates ACTH secretion. Experimental evidence indicates that Corticotrophin releasing hormone (9CRH) directly inhibits hypothalamic GnRh secretion, probably by augmenting endogenous opioid secretion. Beta endorphin is found in the same anterior pituitary cells as-ACTH. It is secreted parallel with ACTH in response to stressful stimuli.

The exact mechanism of stress induced amenorrhea is unclear but it is mediated by above pathway. In short, excessive stress probably stimulates production of Cortisol's as well as endorphins further inhibiting the release of gonadotropins. It suppresses secretions of FSH and LH. This could probably play & role in genesis of anovulatory cycle.

Thus, the opioid peptides also play an important role to maintain the cyclicity of menstrual rhythm. Similar mechanism could be explained in the stress of modern life style today predisposing to problems of PCOD, obesity related menstrual disturbances. The consequences of uncontrolled chronic stress of demanding life style on body are profound. A continual state of stress disturbs the neurochemical balance in brain leading to increased appetite. Depression also increases desire to eat more. Stress induced Cortisol, insulin resistance predisposes to weight gain leading to central obesity. This predisposes to PCOS.

Development of PCOS is itself a stressor. Excess hair growth, hair loss, overweight acne and associated infertility result in diminished self-esteem, reduced quality of life and negative body image. we are aware about Hypothalamus - pituitary - ovarian axis which controls the menstrual rhythm.

ROLE OF YOGA

Ayurveda deals with Ayu, which is a combination of physical body along with its senses, mind and soul.^[6] There is something beyond the hormones which controls the rhythmicity, that is our mental and emotional set up. How the thoughts and emotions which are a non-molecular entity are converted to neurotransmitters which are a physical entity is unknown even to modern medicine today. Hypothalamus is connected to ANS, higher areas of cerebrum and limbic cortex which is seat of emotions and to pituitary gland by portal circulation.

Stressful events evoke emotional response in form of release of opioids, neuro transmitter. These substances disturb HPO axis.

In Yogashastra 8 steps of yoga Yam, Niyam, Assam, Pranayama, Pratyahar, Dharna, Dhyan, Samadhi. Yoga is master for training emotions. It helps us to develop optimism, control over impulsive behavior and channelize our negative emotions. Yoga is nothing but homeostasis, or equanimity, harmony or balance, joy or happiness. It is a perfect life style.

Yoga means physical reconditioning, mind controlling and emotion culturing and spiritually evolving. It was observed that regular yogic practices help in improving insulin resistance and also help in increasing serum levels of sex hormone binding globulins. This helps in reducing levels of free serum testosterone. Serum LH levels decrease, FSH levels increase bringing spontaneous ovulation.

Specific yoga poses that can help in PCOS^[7]

Garland Pose (Malasana)

Malasana can strengthen the pelvic floor and abdominal core while opening the hips. Bhanote says this can benefit individuals with PCOS by increasing circulation and blood flow to the pelvic region, improving metabolism, and aiding digestion.

You can use a block or two under your glutes for support until your body becomes familiar with this position.

1. Start with feet about a mat's width apart.
2. Bend your knees and lower your buttocks toward the floor to come into a squat position.
3. Bring your hands in prayer position (anjali mudra). You can allow your thumbs to touch your sternum to help keep the chest lifted.

4. Press your upper arms/triceps inside of your knees and stay engaged with spine straight (elbows press into knees to open the hips).
5. Extend the low back and draw shoulder blades toward one another.
6. Remain in this position for up to 5 breaths.
7. Come out of it by straightening your legs.
8. Repeat the pose for a total of three times.

It's OK if your heels don't remain planted on the ground when you come into the position. Support the heels with a rolled blanket to help keep you balanced and upright.

Bridge Pose (Setu Bandhasana)

Bridge Pose can calm the brain and reduce stress and anxiety while relieving tension in the back muscles.

1. Start by lying on your back with your knees folded and feet hip-distance apart on the floor.
2. Place your hands, palm down beside your body.
3. Inhale while slowly lifting your lower back, mid-back, then upper back off the floor (while the pelvis lifts up, lengthen from pelvis to sternum).
4. Gently roll the shoulders and bring the chest toward the chin.
5. Keep thighs parallel to each other and the floor with all four corners of the feet pressed firmly into the ground.
6. Breathe with ease and stay in this pose for 1–2 minutes.
7. Repeat up to 5 times.

Bow Pose (Dhanurasana)

Dhanurasana may help relieve menstrual discomfort, stimulate reproductive organs, and regulate menstrual flow, according to Bhanote. "It increases circulation to the pelvic region, releases tension from abdominal organs, and also stretches the neck, shoulders, and legs muscles," she says. Overall, it may improve anxiety and decrease stress.

1. Start lying down on your stomach with your arms on the side of your body.
2. Fold your knees up and reach your hands to hold your ankles.
3. Breathe in and lift your chest up off the ground while pulling your legs up.
4. Hold the pose for 15 seconds, and remember to keep breathing.
5. To release, bring your chest and legs back toward the ground, release the hold on your ankles, and relax, face down.

6. Repeat for a total of 3 times.

If you cannot reach both of your ankles at the same time, you can do one leg at a time, or use a yoga strap for assistance.

Cat-Cow Pose (Chakravakasana)

The Cat-Cow Pose is also high on Burnett's go-to list for PCOS.

1. Get in tabletop position with your palms down, wrists and elbows aligned under shoulders, knees under hips, ankles straight back from the knees. You can curl the toes under or tops of the feet down, as the flow moves you.
2. Inhale, bend the elbows, lower the belly, lift the chin and the tail bone simultaneously, moving each of the vertebrae of the spinal column in a wave.
3. Reverse the movement on the exhale by tucking the tail bone and chin, and doming the back as you draw the navel toward the spine as the chin tips toward the chest.
4. Repeat for desired amount of times.

Head-to-Knee Pose (Janusirsana)

Burnett says this is a great "all-inclusive" pose.

1. Sit down on a yoga mat.
2. Extend the left leg to the corner of your mat, foot flexed, back of the heel down, toes to the sky. The right knee is bent with the foot tucked as close as comfortable to the groin.
3. Extend your arms over the legs, breathe in deeply, and exhale, moving the upper body gently toward the left foot, while slowly bringing your right arm in an arc over your head. A strap is nice to create resistance and go deeper into this stretch of the rib cage facing the sky (the right on this side).
4. Feel the twist of the torso, the shoulder/hip opener, the gentle massage of the sacroiliac joint, and the movement of kidneys, ovaries, and each internal organ with each deep breath.
5. Do 7–12 on each side.

Butterfly or Bound Angle Pose (Supta Baddhakonasana)

Burnett says this is an excellent restorative pose that completely supports the spine and back body, while gently releasing tension from the shoulders and chest, and opening the heart and the hips.

This pose is appropriate for every level. To modify, use blankets or pillows under the shoulders, under the head at an incline, and under the thighs.

1. Begin seated on the mat with legs extended in front of you.
2. Bend your knees and bring your heels toward you to press the soles together. Your knees will drop to the sides.
3. Lean backward until your back is on the floor. Arms will be supported and open, palms up.
4. Close your eyes, breathe deeply for 3–5 minutes, or longer if you are comfortable.
5. Be sure to come out of the pose mindfully, by rolling to your right side and pausing there for several breaths and then up to seated, or in any way that works best for you.

Bonus breathing technique (Kapalbhati Pranayama)

“Kapalbhati is a rapid breathing exercise that may help a few of the characteristics associated with PCOS such as weight management, blood sugar levels, and stress levels,” says Bhanote. In this technique you will inhale normally but exhale with force and the help of the abdominal muscles. This is best if performed on an empty stomach. This breathing exercise is not recommended during pregnancy.

1. Sit in a chair or cross-legged on the floor.
2. Close your eyes and try to relax the entire body.
3. Inhale deeply through the nose while expanding the chest.
4. Exhale with forceful abdominal muscle contractions to relax.
5. Repeat 10 times (1 cycle) up to 5 minutes while beginning.

Surya Namskara^[8]

Sun salutation, also known as Surya Namaskar, is an ancient method consisting of a sequence of yoga asanas or positions performed to reverence the sun. The sun has always been revered throughout human history, and in Hindu mythology, the Sun-God, or Surya, is a symbol of good health and eternal life.

Suryanamshkar (Sun salutation) - It is an ancient yogic method to worship sun and consists of series of postures (Asanas) with breathing pattern. It balances the whole endocrinal system by direct massaging of glands and increasing blood flow to organ thus regularizes the menstrual cycle.⁵ Sun salutation significantly decreases blood sugar level, increases insulin sensitivity, improves lipid profile and results in weight reduction, improved BMI, low waist hip ratio.

1. Pranamasana (Prayer pose)

2. Hastauttanasana (Raised arms pose)
3. Hastapadasana (Standing forward bend)
4. Ashwa Sanchalanasana (Equestrian pose)
5. Dandasana (Stick pose)
6. Ashtanga Namaskara (Salute with eight parts)
7. Bhujangasana (Cobra pose)
8. Adho Mukha Svanasana (Downward facing dog pose)
9. Ashwa Sanchalanasana (Equestrian pose)
10. Hastapadasana (Standing forward bend)
11. Hastauttanasana (Raised arms pose)
12. Tadasana (Mountain Pose)

Suptbandhkonasan (Reclining Butterfly Pose) - Stimulates abdominal and pelvic organs like ovaries, urinary bladder, stretches inner thighs and groin which helps in relieving symptoms of stress and menstrual irregularities.^[7]

Halasana (Plough pose) - It improves cardiovascular health and menstrual irregularities by reducing belly fat.

Dhanurasan (Bow pose) - It is the best pose to reduce body fat and weight as it stretches the abdominal muscle to fullest of their strength.

Bhujangasana (Cobra pose) - This asana exerts pressure over the abdomen and boosts the ovarian functions.

Chakki chalanasan (Moving wheel pose) - It helps to modify the endocrine glandular functions thus enhances efficiency of hormonal secretions.

Padmasan (Lotus pose) - This asana stretches the pelvis region.

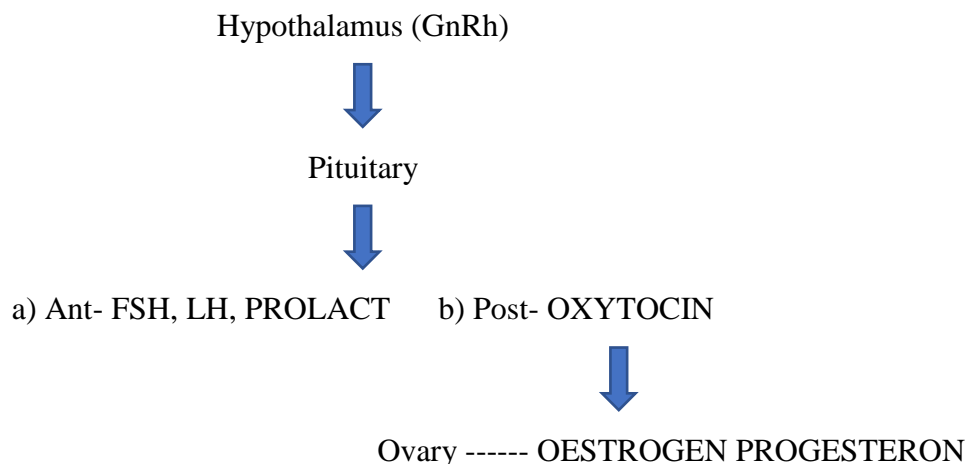
Naukasana (Boat pose) - This asana exerts pressure over the abdomen and corrects the functions of organs present in and around the pressurized area. Probable mode of action of yoga poses (Asanas) can be explained by various researches and hypothesis. Yoga therapy focus on energy system present in the body with numerous chakras. Yoga poses like forward bending and backward bending increases second chakras energy flow called as seat of creation where reproductive organs are present. Yoga poses stretches abdominal region which

increases blood flow towards reproductive organs and relieves any kind of tension around reproductive organs. By relieving stress yoga poses help in improving ovulatory functions.

Science of yoga that work for women with PCOS^[9]

The science of yoga works at root cause of PCOS i.e. stress and Obesity. Yoga is much deeper than just the physical body level. Yoga helps to release deeply stored stress in the system, which can help improve PCOS symptoms. Yoga is a psycho-somatic spiritual discipline for achieving union and harmony between our mind, body and soul by practicing specific techniques such as Yoga postures (Asanas), Breathing techniques (Pranayam) and Meditation (Dhyana) to attain highest level of consciousness. Documented scientific evidences strongly indicate that yoga has preventive as well as curative potential. Being a safe therapeutic modality, it can be used as an effective lifestyle adjunct to medical treatment to improve the quality of life in PCOS subjects.

1. Holding weight-bearing poses builds muscle. In turn, increased muscle mass helps to combat insulin resistance – one of the keys to PCOS management.
2. An active yoga practice increases heart rate, providing a cardiovascular workout and leading to weight loss.
3. Asanas and pranayama promotes hormonal balance and deep relaxation, helping to bring the adrenal and cortisol levels of stressed-out PCOS minds and bodies in check.
4. Yoga philosophy and Ayurveda, describe certain poses as stimulating energy systems within the body that may be stagnant in women with PCOS as a means to bring the body into balance. The steady and comfortable Posture brings about better co-ordination of muscular system with nervous system.
5. Increase in correcting excessive or insufficient secretion of endocrine gland so that their optimal integration is achieved.
6. Hormones go to shake our emotional making their taming produces emotionally balance and mentally poised personality and building a strong will.
7. There are many yoga postures, which are good for PCOD. Few of their benefits are
 - a. By practicing them they improve blood circulation and also the muscle tone of blood vessels help in removal of accumulated toxin and metabolic waste from body.
 - b. To activate the pituitary and thyroid gland hypothalamus, adrenal gland. (Maintain the H P- O axis).



Three Month (daily 10 to 15 minutes) practice noticed that the normal development of secondary sexual character, regularizes and correction of PCOD, infertility, removal of inferiority complex, physical and mental stress, unhappiness, which is most important for future a healthy progeny.

Yoga helps to regulate the endocrine glands in the body thereby beneficial in the balancing hormones. Yoga helps to balance tridoshas.

Physical activity has been reported to ameliorate anovulation, insulin resistance, hypertension and high lipid profile in women with PCOS. Researches has also reported the effect of yoga.

Study design, size, duration

Prospective observational study analyzing the data from 10 women attending the clinic. random 5 Patient from age group 18 to 25 which is unmarried and 5 patients from age group 25 to 32 which is married.

RESULTS AND DISCUSSION

Yoga is a holistic science and art of living. This is because routines Yoga Asanas (poses), Pranayamas breathing techniques and Kriyas (cleansing exercises) prescribed in Yoga help to tone up the whole system.

Women diagnosed with PCOD or PCOS have profound insulin resistance, obesity and increased level of androgens. Weight reduction is main preventive and therapeutic potential to combat with this catastrophe which can be achieved by incorporating lifestyle modifications. Ayurveda dietary regime the wholesome food (Pathya Ahar) and Yoga interventions mentioned in Ayurveda literature are main key which keeps individual healthy

and regulates functions of endocrine system. Breathing techniques (Pranayama) helps a lot in relieving the symptoms of PCOD or PCOS related to deep rooted mental stress and keep the individual high to fight with this embitter syndrome. All these lifestyle modification increases the fertility rate and improve the quality of lifestyle in patients of PCOD or PCOS.

Daily yoga for 30 minutes with 4 Asanas, 4 Pranayama, meditation and Shavasana helps in weight reduction and stress management which ultimately stabilize the normal function of hypothalamo- pituitary – ovarian axis and cure PCOD and PCOS. So, it is time to acknowledging the role of Yoga as a safe and effective treatment for PCOD and PCOS.

CONCLUSION

Regular practice of Yogasanas, Meditation, combined with a healthy lifestyle and medical treatment, can contribute to the management of PCOD and PCOS symptoms and overall well-being.

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